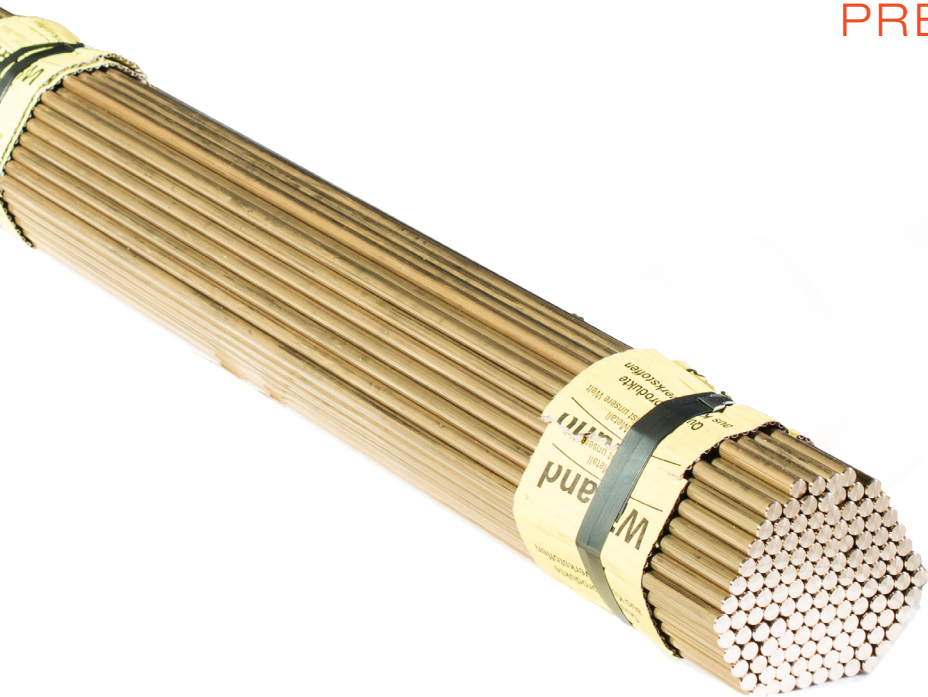


# Wieland

PRECISION BRASS ROD

W5000



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**W**  
5000

# W5000 ROUND ROD

## W5000 THE BRASS ROD FOR HIGHEST DEMANDS!

The W5000 rod is our premium product for your high-precision machining. Due to the diameter tolerance h8 which is further reduced within a bundle, our size range **1.5 to 10 mm** is particularly suitable for machining on automatic long-turning lathes running at high speeds. These sizes are available with a uniformly smooth surface drawn with diamond tools for the highest demands.

Our rods in sizes over **10 to 50 mm** have been specially optimized for machining on multi-spindle automatic lathes. For diameters up to 30 mm we supply these rods with a tolerance h8. The end finish that is suitable for automated processing enables smooth feeding and unmanned operation.

Our rods in sizes over **50 to 80 mm** are supplied in drawn temper and ensure a trouble-free machining because of their high precision and constant properties.

## GEOMETRY

- | Inspected geometry for each rod. We guarantee a **straightness deviation of 0.5 mm/m for diameters of up to 80 mm.**
- | Cut lengths, no deviation within a batch.
- | Reduced diameter variation within a batch.
- | Minimal out-of-roundness.
- | Constant diameters within a rod/bundle/packaging unit. Reduced tolerances for sizes 4 to 10 mm, within a bundle the diameter tolerance h8 is reduced to 5 µm and the out-of-roundness is restricted to 0.05 % of the diameter.

| Nominal Ø [mm] | ISO tolerance [mm] |        | Out-of-roundness [mm] |
|----------------|--------------------|--------|-----------------------|
| 2              | h8                 | -0.014 | max. 0.002            |
| 3              |                    |        |                       |
| 4              |                    |        |                       |
| 5              | h8                 | -0.018 | max. 0.0025           |
| 6              |                    |        | max. 0.003            |
| 7              |                    |        | max. 0.0035           |
| 8              | h8                 | -0.022 | max. 0.004            |
| 9              |                    |        | max. 0.0045           |
| 10             |                    |        | max. 0.005            |

## TECHNICAL DELIVERY CONDITIONS

- | End finish suitable for automatic feeding.
- | Bright drawn surfaces.
- | All rods are eddy current tested.
- | Manufacturer's mark on rod face with diameter > 7 mm.

| Nominal ø [mm] | Chamfer length [mm] | Point length [mm] |
|----------------|---------------------|-------------------|
| <5             | 0.2–1.0             | 1.5–4             |
| 6–10           | 0.2–1.5             | 2–7               |
| 11–20          | 0.2–2.0             | 3–10              |
| 21–30          | 0.2–3               | 4–12              |
| 31–39          | 0.2–4               | 7.5–11            |
| 40–42          | 0.2–4               | 10–12             |
| 43–70          | 0.2–4               | second end sawn   |
| 71–80          | both ends sawn      | both ends sawn    |

## QUALITY FEATURES THAT SPEAK FOR THEMSELVES

### Wieland- Z33 and Wieland-Z41

- | Constant properties due to close alloy tolerances.
- | Good machinability due to fine and homogeneous lead distribution.
- | Long tool life due to low contamination level and optimized phase distribution.
- | Our material Wieland-Z41 is approved for use in drinking water in Europe.

| Wieland | Material designation |        |        | Chemical composition % |         |    |
|---------|----------------------|--------|--------|------------------------|---------|----|
|         | EN                   | UNS    |        | Cu                     | Zn      | Pb |
| Z33     | CuZn39Pb3            | CW614N | C38500 | 58                     | balance | 3  |
| Z41     | CuZn40Pb2            | CW617N | C38000 | 58                     | balance | 2  |

## PACKAGING

### Size range 2 to 5 mm

The rods are tied with cord in small bundles of approx. 25 kg and packed in a wooden box lined with recyclable PE foil. Net weight approx. 250 kg.

### Size range > 5.5 to 9.5 mm

Small bundles of approx. 25 kg up to 7.5 mm. Loose packaging for larger sizes. The rods are packed in a wooden box lined with recyclable PE foil. Net weight approx. 500 kg.

### Size range > 10 mm

The rods are supplied preferably in bundles of approx. 500 kg. Alternatively, they are available in bundles of up to 1,000 kg. The bundles are steel strapped several times over corrugated cardboard and in order to prevent them from sliding one bundle end is wrapped in jute sacking. These specifications apply to our standard packaging. Special packaging is available on request.

## MECHANICAL PROPERTIES

We guarantee constant mechanical strength properties through tight tolerances for reliable finished products.

| Size range | EN Temper | R <sub>m</sub> [MPa] | R <sub>p0,2</sub> [MPa] | Elongation at rupture [%] |
|------------|-----------|----------------------|-------------------------|---------------------------|
| 2–<4       | R500      | min. 500             | min. 350                | A 100 –                   |
| 4–8        | R500      | min. 500             | min. 350                | A11.3 min. 3              |
| >8–14      | R500      | min. 500             | min. 350                | A min. 5                  |
| >14–60     | R430      | min. 430             | min. 220                | A min. 10                 |
| >60–80     | R360      | min. 360             | max. 350                | A min. 20                 |

## WORK EFFICIENTLY AND COST-EFFECTIVELY THANKS TO OUR CONSTANT QUALITY.

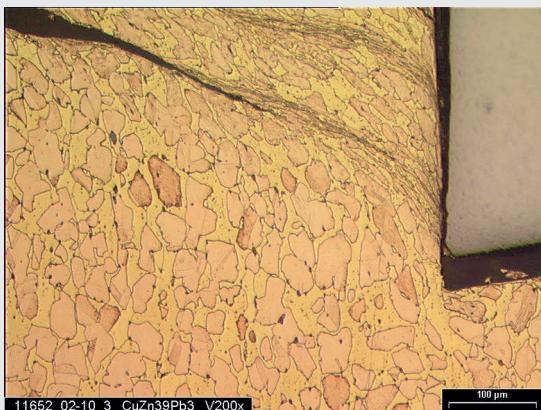
A calculation that pays off. Make use of the advantages of our consistently high quality for a stable manufacturing process!

|                                 | Wieland W5000<br>Toleranz ISO h8* | normale Rundstange<br>Toleranzen nach EN |
|---------------------------------|-----------------------------------|--|
| Number of revolutions [1/min.]  | 5.000                             | 3.000                                    |
| Machining time/component [sec.] | 17                                | 28                                       |
| Mach. hourly rate [€]           | 51                                | 51                                       |
| Mach. costs/component [€]       | 0.24                              | 0.40                                     |
| Yield [components/h]            | 212                               | 127                                      |
| Costs/1,250 components [€]      | 302                               | 503                                      |
| <b>Saving with W5000</b>        | <b>201 €/100 kg</b>               |  |

\*Straightness deviation 0.5 mm/m;  
example refers to diameter of 22 mm

For further sizes and types please refer to our stock list.

### Lead distribution



The formation of needle chips is essentially determined by a balanced ratio between alpha and beta phases with homogeneous lead distribution. Lead results in short chips, low tool wear and cutting forces.

**Wieland-Werke AG**

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